

EMERGENCY ACTION PLAN



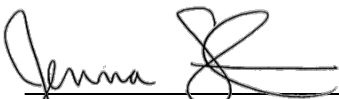
siamab
therapeutics

90 Bridge St Suite 100
Newton MA 02458

July 2015

Emergency Action Plan

The following Emergency Action Plan dated July 2015, as written, has been approved by:

Signature: _____

Date: 09/02/2015

Title: Emergency Coordinator

Print Name: Jenna Stein

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1. PURPOSE

Siamab has created this document to provide procedures for the proper response to a fire, explosion, spill of a hazardous substance, release to the environment, and employee injury/illness response. This document fulfills the requirements of OSHA 29 CFR 1910.38 and 157, Massachusetts Board of Fire Prevention 527 CMR 1.00, and Massachusetts Department of Environmental Protection 310 CMR 30.000. Copies of this plan have been submitted to The Newton Biosafety Committee, Newton Fire Department, and the Newton Board of Alderman.

According to the Standard Industrial Classification (SIC) or North American Industrial Classification System (NAICS) code, Siamab is classified as a research and development laboratory, code # 541711.

2. COMPANY OVERVIEW

Siamab Therapeutics is a biopharmaceutical company developing novel cancer immunotherapies. Siamab's office and labs are located at 90 Bridge St, Suite 100 in Newton MA.

Siamab operates a Biology lab, the main lab is BL1 and the tissue culture suites are BL2. Some hazardous chemical are used on site in small quantities which include acids, bases, solvents and some toxic substances.

Operation of the Newton site began in Sept 2015.

3. FACILITY OPERATION

Siamab operates 4,580 square ft of space on the first floor of 90 Bridge St, Suite 100. The operation includes, office space, and lab space. The lab consists of a BL1 main wet lab and a small BL2 tissue culture suite, within in the main lab there is a small amount of solvent storage and solvent waste storage.

Copies of the current floor plans are included in appendix I of this manual.

Normal business hours are Monday through Friday, 8am – 5pm.

The company began operations at this location in Sept 2015.

The property is owned and managed by;
Chapel Bridge Park Associates
55 Chapel St Suite 020
p. (617)969-5378

Emergency Contacts for this facility:

Emergency Coordinator Jenna Stein
Chemical Hygiene Officer, Biological Safety Officer, back up EC Jillian Prendergast

4. HAZARDOUS WASTE

The company is characterized by the Department of Environmental Protection (DEP) as a very small quantities generator of hazardous waste. In general, there is 5 gallons of hazardous waste on site at any given time. Waste is collected in Hazardous Waste Satellite Accumulation Areas (SAA), located in the main lab, where the waste is generated and in a Main Accumulation Area

(MAA), located in the main lab. Veolia has been contracted for removal of hazardous waste and Stericycle has been contracted for removal of regulated medical waste.

5. HAZARDOUS MATERIAL PROCESSING

Siamab has conducted a thorough review of the hazardous material processes occurring at this location, and has documented that all processes fall into category 1, as specified in 527 CMR 33.03. A hazard analysis has been completed for each process to ensure that appropriate control measures have been implemented. A Chemical Hygiene Plan has been developed and implemented to comply with 29 CFR 1910.1200, 29 CFR 1910.1450, and 527 CMR 14.00. In addition, a flammable storage permit has been obtained from Newton Fire Department. Appendix II provides a summary of the hazardous material process evaluation.

In general, hazardous material is handled in vessels with capacities that are less than 5 gallons. Flammable, toxic, and corrosive materials are in use at this location.

6. TRAINING

Siamab provides emergency response, fire extinguisher overview, and incidental spill response training to all new employees within 1 week of hire and all employees are given annual refresher training. New employees review this plan during the first week of hire and all employees can access the Emergency Action Plan kept in the central safety files and electronically in the shared Safety file.

Additional training, such as RCRA hazardous waste handling, CPR/First Aid, AED operation, and DOT/IATA overview is given as needed and upon direction of the Safety Committee.

With the exception of basic awareness training in the use of fire extinguishers, Siamab employees are not trained to respond offensively to fires; Siamab does not have an Emergency Response Team or Fire Brigade. Offensive response is limited to incidental situations as defined in section 10. Emergency response above and beyond incidental spill response is performed by third-party contractors or by public services, as detailed in the sections that follow. Basic fire extinguisher training only provides enough knowledge of fire extinguishers to use one to escape a fire; not to aggressively fight a fire.

7. EMERGENCY ASSISTANCE AGREEMENTS

Newton Fire Department: Provides the primary and principle response for emergency situations at Siamab. The Newton Fire Department must be notified by a Siamab employee of all fires, and uncontrolled spills, as required by law.

Newton Police Department: Provides response for emergency situations at Siamab.

Mt Auburn Occupational Health: Provides medical surveillance and occupational health services for Siamab personnel.

Newton- Wellesley Hospital: Provides emergency medical care for Siamab personnel.

Veolia: Provides emergency chemical spill clean-up for Siamab. Veolia will respond to calls for assistance by Siamab's Emergency Coordinator on a 24 hour a day, 7 day per week basis. Assistance to chemical waste spills is not immediate; it usually takes place within 2-3 hours of notification to Veolia. NOTE: Veolia will not initiate clean-up until the Newton Fire Department has been called.

Newton Board of Health: Helps prepare for and respond to public health emergencies such as natural disasters and acts of terrorism.

Safety Partners, Inc.: Provides comprehensive Safety Program coordination for Siamab. Experts in the entire range of safety fields are available through the Safety Partners network.

8. RESOURCES

This document and other safety resources are available in the central safety files and electronically in the shared Safety folder. Emergency phone lists are posted by public phones in the labs and are the first item in the red emergency binders that are placed throughout the facility. Safety Data Sheets (SDS) are located in the filing cabinet with the central safety files. Many chemical vendor websites provide electronic access to SDS for chemical products. A good reference website for SDS from many manufacturers is Vermont SIRC, located at www.hazard.com. Siamab's Chemical Hygiene Plan (CHP) is located in the central safety files and electronically in the shared safety folder.

9. RESPONSIBILITIES

Emergency Coordinator

1. Establishes the evacuation plan for the facility.
 - a. The emergency plan must take into account people with physical handicaps, such as sight impaired, hearing impaired or those confined to a wheelchair. See Appendix III for provisions for individuals with disabilities at Siamab.
 - b. Ensures that emergency equipment is available and in good working order.
 - c. Ensures that evacuation routes are posted in appropriate areas.
 - d. Calls role when an emergency evacuation occurs.
2. Communicates with responding emergency crews to give information regarding:
 - a. The type of emergency (medical, fire, hazardous spill, etc.)
 - b. What hazards may be involved
 - c. What may have caused the emergency

- d. Missing employees (if it is an evacuation)
3. In the event of a fire, explosion, spill or other release, the Emergency Coordinator will:
 - a. Work with the responding emergency crew to immediately identify the character, source, amount, and extent of all released or involved materials;
 - b. Assess hazards to public health, safety, welfare, or the environment that may result from the fire, explosion, spill or other release. The assessment will consider both the direct and indirect effects of the emergency.
4. Updates the Emergency Action Plan (EAP) as needed. The EAP is reviewed and amended when:
 - a. The plan, or elements of it, fail, or are shown to be defective, during a drill or actual emergency situation.
 - b. There are amendments to the list of emergency contacts or responsible personnel.
 - c. There are significant changes in configuration, maintenance or operation of the facility.
 - d. There are regulatory changes which have an impact on the provisions of the plan, or annually, at a minimum.

See Appendices IV and V for more detailed information on the Emergency Coordinator responsibilities and the call down list for emergencies, respectively.

Jenna Stein is Siamab's Emergency Coordinator.

Emergency Coordinator Back-up

The Emergency Coordinator Back-up will be responsible for sections 2 through 4 above in the absence of the Emergency Coordinator.

Jillian Prendergast is Siamab's Emergency Coordinator Back-up.

Safety Officers

Siamab's Chemical Hygiene Officer and Biosafety Officer will:

1. Determine spill hazard level, when requested.
2. Review spill response procedures and investigate all reported spills, and the clean-up and disposal methods that were employed. Propose improvements to current procedures, where possible.
3. Review, investigate and document accidents or personnel exposures to hazardous materials and the procedures and treatment that were followed. Propose improvements to current procedures, where possible.

Jillian Prendergast is Siamab's Chemical Hygiene Officer (CHO) and Biological Safety Officer (BSO).

Safety Team

The Safety Team consists of the CHO, BSO, EC and members of the safety committee and those individuals trained in First Aid / CPR. Safety Team members are listed in Appendix VI under Emergency Contacts, and in Appendix VII on the emergency phone list.

Facilities

The Emergency Coordinator will:

1. Give consideration to monitor for leaks, pressure buildup, gas generation and other potential hazards during an emergency response.
2. Ensure that all emergency equipment and systems used during an emergency are cleaned, recharged, reactivated, or replaced as soon as possible after an emergency response. This includes fire extinguishers, first aid kit components, AED supplies, etc.
3. Evaluate and maintain all operating systems on a daily basis within the facility.
4. Investigate system failures that may impact work conditions and cause a hazardous situation.
5. Ensure alarms are clearly audible and strobes are visible from all locations in the building. These should be tested quarterly.
6. Ensure all “Exit” signs are lit and readable on a daily basis.
7. Provide emergency procedures to all contractors on the first day of a work project.

Supervisors

1. Are responsible for ensuring compliance with spill response and emergency procedures provided in this document.
2. Are responsible for prompt evacuation of their employees in an orderly manner when hearing the alarm.
3. Are responsible, after an incident occurs, for the completion and filing of an incident report and completing all corrective actions promptly.
4. Must ensure there are emergency evacuation provisions for employees with special needs. This shall be a written plan submitted to the Human Resources Manager and Chemical Hygiene Officer.

Employees

All employees of Siamab will:

1. Read this plan and know where to locate it on the network and in the central safety files.
2. Know the definitions of incidental and emergency situations and the response required for each.
3. Notify their Supervisor, the Safety Officer and members of the Safety Team whenever a spill, fire, injury or exposure occurs or is discovered.
4. Report all incidents, accidents and exposures by completing an incident report.
5. Provide emergency procedures to visitors and contractors on their first day of a work project and ensure that they are aware of emergency evacuation routes and the locations of basic emergency equipment.

6. Communicate to a co-worker or Supervisor when leaving the building for lunch, an errand, an appointment, etc. This ensures an accurate headcount in an emergency situation.
7. Evacuate in an orderly and calm manner when hearing the alarm. Employees are responsible to meet at the designated area outside the building and not re-enter or leave Siamab property unless authorized to do so.

10. DEFINITIONS

Incidental Situation: Any minor spill of chemical or biological material, or a fire that can be managed *safely* by the immediately responsible employee, with a ‘buddy’, and is within the scope of the Chemical Hygiene Plan, Hazard Communication Plan or Fire Extinguisher Training. Chemical spills below the established action limit qualify for this classification. A contained fire in a lunch room toaster may also qualify.

Emergency Situation: A situation that is outside of the ordinary and creates a hazard to the staff’s health, safety, or to the environment. Response poses a danger to the responder.

Incidental Response: Response to an Incidental Situation. Employees clean-up chemical or biological materials as trained, follow appropriate procedures for waste handling and notify the Safety Officer as soon as possible. An accident/incident report shall be completed by the employee and their Supervisor within 24 hours.

Emergency Response: Response to an Emergency Situation. A coordinated response effort from outside the immediate area or by outside responders (local fire department, etc.) to a fire, or an occurrence which results, or is likely to result, in an uncontrolled spill of a hazardous material.

11. EMERGENCY EVACUATION

Upon the sound of the fire alarm or for any emergency requiring immediate evacuation, everyone must promptly evacuate using the emergency exit stairwells. **Do not use the elevators!** If an emergency exit stairwell is blocked, proceed to the next closest emergency exit.

Whole Facility Evacuation Procedure

1. Pull the nearest fire alarm to initiate an evacuation of the building. Alarms are generally located near building exits. Fire extinguishers have limitations. Do not delay pulling the fire alarm.
2. Upon hearing the fire alarm, or being informed of an evacuation, **stop what you are doing.** If there is time, expeditiously terminate, or secure, any hazardous experiment or procedure that is in process. **Leave immediately.** Walk calmly to the nearest stairwell exit. Know secondary and tertiary egress routes in case fire or other hazard blocks your primary egress.
3. Shut doors behind you if you are the last one leaving an area.

4. **Assemble** in the parking lot just across the street at the corner of Bridge St and Silver Lake Ave. Make sure you are accounted for. Do not leave the area unless instructed.
5. Notify the Emergency Coordinator if you know of any missing or injured employees and/or have any information relevant to the nature or location of the emergency.
6. Emergency Coordinator: Act as a liaison between the local emergency responders and Siamab, funneling information about missing people and details of the incident.
7. Do not attempt to enter the building until the Fire Department states that it is *okay* to reenter.

Partial Evacuation Procedure

For emergencies where the situation can be contained or confined within a discrete area of the facility, a partial evacuation may be declared by the Emergency Coordinator or by personnel working in the area with oversight by the Supervisor and Safety Officer.

Isolate the area by closing the doors and/or using barrier tape, signs or personnel posted in the vicinity. Pay special attention to ventilation systems, elevators and other places where material may possibly spill to other floors of the building. There must be no risk to employees or the environment outside the boundaries of the area so affected. If this condition is not met, the entire facility must be evacuated.

12. FIRE EXTINGUISHER USE

When to Use An Extinguisher

Portable fire extinguishers have two functions: to control or extinguish small or incipient stage fires and to allow escape through the evacuation route when it is blocked directly or indirectly with smoke or fire. Always pull the fire alarm first, if possible.

How to Use An Extinguisher

Hands on fire extinguisher training is required if employees will be asked to use fire extinguishers.

The following steps should be followed to safely exit an area if all egresses are blocked by fire:

1. If possible and safe to do so, sound the fire alarm and call the fire department. The fire department must be notified of all fires.
2. Identify a safe evacuation path before approaching the fire. Do not allow the fire, heat, or smoke to come between you and your evacuation path.
3. Select the appropriate type of fire extinguisher. See the Chemical Hygiene Plan (CHP) for extinguisher types.
4. Discharge the extinguisher within its effective range using the P.A.S.S. technique (**p**ull, **a**im, **s**queeze, **s**weep).
5. Back away from an extinguished fire in case it reignites.
6. Evacuate immediately as soon as it is safe to do so.

NOTE: All fires must be reported to the Fire Department immediately, no matter what the size or status is. Even incipient fires that are extinguished must be reported immediately.

The P.A.S.S. Technique

1. **PULL...** Pull the pin. This will also break the tamper seal.
2. **AIM...** Aim low, pointing the extinguisher nozzle (or its horn or hose) at the base of the fire.
3. **SQUEEZE...** Squeeze the handle to discharge the extinguishing agent.
4. **SWEEP...** Sweep from side to side aiming at the base of the fire until it is out. Watch the area; do not turn your back to the fire area. If the fire re-ignites, repeat steps 2 - 4.

**If you can do so safely....EVACUATE
IMMEDIATELY!**



13.MEDICAL EMERGENCIES

1. For all medical emergencies, yell “HELP” to notify others that there is a person who needs medical assistance.
2. Dial 911 for all medical emergencies. Describe the type of emergency, building address, location within the building, and any other pertinent information that would be helpful to the response crew. If applicable, secure an elevator for the emergency crews to use.
3. First Aid kits are located in the kitchen.
4. **After Hours:** Dial 911; notify building security and have someone at the front door so that emergency personnel can gain access to the building.
5. Notify your Supervisor and at least one member of the Safety Team (see Appendix VI or VII for listing) ASAP.
6. If you believe you had an exposure or exhibit adverse health effects, call the ambulance. NEVER drive yourself.
7. A staff member should bring a SDS of the hazardous material with you to the Emergency Room.
8. A Supervisor or a Safety Team member should contact Mt Auburn Occupational Health Services; and explain the situation to the Nurse or Doctor on staff or leave a message on the voice mail.
9. Supervisors and Safety Team members are responsible to evaluate and respond to these emergencies as appropriate. During a medical emergency, activate 911 and seek expert advice as needed (Safety Consultants, Occupational Health Physician).

10. The Supervisor will submit a written report (Appendix IX) to the HR Manager, with a copy to the Safety Officer, within 24 hours.

Medical Emergency Response

Exposure Response	In general, wash well with water for 15 minutes. If material is water reactive (for example, viscous acid), first remove excess, and then wash well. Force-bleed minor cuts.
Eye Splash	Hold eye open while using eyewash station. Flush eye for 15 minutes.
Exposed Skin	Wash well with water in the sink or drench shower for 15 minutes. Remove contaminated clothing by cutting off the body to avoid further exposure. Scrub uniforms are available to wear after shower.
Cuts & Abrasions	Cleanse wound and surrounding skin with warm water, wiping away from the wound. Hold a sterile or clean pad firmly over the wound and apply pressure directly to the wound. If bleeding profusely, call 911. If the cut is severe, keep victim lying down and raise the bleeding part higher than the rest of the body with continued direct pressure to the wound.
Clothing	Remove clothing immediately. If pulling clothing over the head will cause more exposure, cut the clothing from the victim's body. Wash exposed skin thoroughly. Scrub uniforms are available to wear.
Poisoning (inhalation)	Do not attempt rescue unless it is safe to do so. Remove the victim to fresh air. Keep victim warm. Refer to manufacturer's SDS and call Occupational Health.
Poisoning (ingestion)	Call Poison Control at 1-800-222-1222. Refer to manufacturer's SDS. Save the label or container for vital information. If the victim is unconscious, maintain an open airway for adequate breathing.

Thermal Burns

If the skin is unbroken submerge the burned area in cool, clean water. Do not break any blisters and do not use any medications.

14. BIOHAZARD EMERGENCIES

Siamab operates labs that are categorized as Biosafety Level 1 and 2. Spill supplies for biological spills are located in the main lab and should include:

1. disinfectant, bleach
2. paper towels, or other absorbent material, like spill pillows
3. gloves
4. safety glasses and goggles or a face shield
5. booties, biohazard bags
6. forceps, or dustpan/broom, or scoop/scraper for sharps

If someone is exposed to biological materials, the injured or exposed person should go to the Emergency Room or Mt Auburn Occupational Health for evaluation and treatment. Follow all the steps for medical emergencies in sections 13 and for Medical Response.

Biological Spill Procedures

Containing biological spills, especially aerosols produced by a spill, is extremely important to the safety of individuals cleaning a spill. Precautions must be taken to avoid spreading contamination while performing biological spill cleanup. All waste produced from the cleanup must be disposed of as biological hazardous waste.

BL1

1. Wash hands and exposed skin immediately if you have been exposed to the spill.
2. Personal Protective Equipment (PPE) must be worn during spill cleanup. A lab coat, safety glasses, and gloves are required. Booties, goggles and face shields should be used as necessary, depending on the volume of the spill and the possibility for splash, splatter or aerosols.
3. Assemble the spill kit materials before attempting spill cleanup.
4. Surround the spill with bleach so that the disinfectant can be mixed into the spill using paper towels. A ring of bleach around the spill will keep the spill from spreading.
5. Place absorbent materials, like paper towels over the spill once the disinfectant has been mixed into the spill.
6. Add bleach over the paper towels to an estimated volume to volume concentration of 1:10, bleach to spill ratio.
7. Allow contact time of at least 20 minutes for disinfection of the spill.
8. Wipe up the spill and dispose of used clean-up materials in the biohazardous waste containers.
9. Dispose of any sharps into puncture resistance "sharps" containers. Never pick up sharps with your hands; use a dustpan and broom or tongs to handle sharps.

10. Clean the spill area with a soapy solution after all materials have been picked up and placed in the appropriate waste containers. This step is necessary to remove any protein substances left on surfaces from the spill.
11. Clean the area one more time with a freshly prepared 10% bleach solution. A 10% bleach solution can be prepared by adding 100 ml of regular household bleach to 900 ml of water. If using industrial strength bleach, read the label and dilute accordingly to a final concentration of 5,000 ppm chlorine. (Most household bleach is 52,500 ppm chlorine).
12. Follow with a final rinse of water or 70% ethanol to remove bleach residue.
13. Reusable items used in spill cleanup must be disinfected or autoclaved prior to returning to the biological spill kit location.

BL2

For spills of BL2 materials, or any BL1 spill that may produce aerosols, use the above listed BL1 spill procedures plus:

1. Leave the lab quickly and evacuate all personnel from the lab. Close the door and post a "no entry" sign.
2. Put any contaminated lab coats and clothing in a red biohazard bag before leaving the lab if it is safe to do so. Seal the biohazard bag and label it with your name, date and identity of the contents. Contact the Biosafety Officer about the spill and potential contamination. Contaminated clothing will need to be autoclaved before being sent to the launderer.
3. Allow 30 minutes for aerosols to settle before reentering the lab and proceeding with clean-up.
4. Contact your Supervisor, Biosafety Officer and a Safety Team Member to discuss the logistics of clean-up.
5. Always wear personal protective equipment, including a lab coat, gloves and safety glasses. Booties, a face shield or goggles may be appropriate depending on the volume of the spill.
6. While cleaning the spill, avoid splashing or splattering the materials, which can produce aerosols.
7. Pour disinfectant, preferably bleach, in a ring around the spill to stop spread of biological contamination. Let the disinfectant flow into the spill and use paper towels to mix the disinfectant into the spill. Make sure you include any areas where aerosols may have settled.
8. Place a layer of paper towels over the spill and pour disinfectant over the center of the towels. The paper towels will reduce any splash or splatter that may occur if you added the disinfectant directly into the spill.
9. Allow 20 to 30 minute contact time before wiping up gently. Remove any sharps or broken glass by an indirect method, such as tongs, a dustpan and broom or a scoop. Any re-usable materials must be autoclave sterilized before returning to the spill kit.
10. Once the area is cleaned of the bulk of the biological spills, clean the area with a soap and water or detergent solution to break up any protein remaining on the surfaces. Follow this with a second application of disinfectant to ensure proper disinfection of the surfaces.

Spills in a Biosafety Cabinet (BSC)

The main protection from biological spills in a BSC is the HEPA filter. If there is a spill in the BSC, check the operation of the HEPA filter by looking at the magnahelix before attempting any spill cleanup.

1. Put on clean gloves, a lab coat and safety glasses. Proceed with decontamination while the cabinet continues to run.
2. Spray down cabinet surfaces and equipment with the preferred disinfectant and wipe all surfaces. If using bleach, follow these procedures with a water rinse to reduce corrosion of the metal surfaces.
3. If possible, lift the front exhaust grille and tray, spray with disinfectant and wipe. If you cannot lift the front grill, flood the drain pan beneath the work surface with disinfectant and allow 20 - 30 minutes contact time before draining.
4. Call the Biosafety Officer and the Facilities Manager if the spill is inaccessible or contaminates a filter.

Biological Mixed Spills

In general, biological mixed spills should be treated as follows:

1. Biological and chemical spills: use a disinfectant that is compatible with the spilled chemical to deactivate the biological material and then treat as chemical waste.

Consult the Chemical Hygiene Officer for all mixed spills.

15. CHEMICAL EMERGENCIES

There are two types of chemical spills: uncontrolled and controlled (also known as incidental). Identification of the type of spill that you have is critical before proceeding with spill cleanup.

A spill is considered controlled when all of the following are true:

1. The spill is limited and not likely to migrate to adjacent areas or be released to the environment.
2. The individuals conducting the cleanup normally occupy the area where the spill occurred, were involved in the event leading to the spill, or regularly work with the material spilled.
3. **The size of the spill, and the hazard posed by the spilled chemical, is such that no danger of bodily harm or toxic exposure to the individuals conducting the cleanup can occur.**
4. Individuals conducting the cleanup fully know and understand the hazards posed by the spilled material, and the measures necessary to protect themselves from exposure or harm.
5. Individuals conducting the cleanup have access to all equipment necessary to conduct the clean-up, such as appropriate absorbents, non-sparking tools, dikes, HEPA vacuums, and disposal bags, and training in their use.
6. Individuals conducting the cleanup have access to all necessary personal protective equipment, and have been trained in the selection and use of the equipment which is appropriate for the specific chemical spilled.

If the spill does not meet the characteristics listed above, the spill is considered uncontrolled.

Response to a Controlled Spill

1. Right the container and put some absorbent materials on it.
2. Notify persons in the area that a spill has occurred and evacuate the immediate area.
3. Restrict access to the spill area by posting signs or using tape.
4. If you are unsure that it is a controlled spill or below action limit for that particular chemical, contact the Chemical Hygiene Officer (CHO) and a HazMat trained member of the Safety Team for spill evaluation. Your Supervisor should be contacted as soon as possible after safety personnel are notified.
5. Review the Safety Data Sheet (SDS) for the chemical and **plan** the spill cleanup prior to entering the spill area.
6. If you need to use spill supplies from a spill kit outside of your immediate area, you must have a **Buddy** to assist with the cleanup.
7. PPE must be worn. Appropriate gloves, a lab coat, and goggles are required when cleaning up a chemical spill. A face shield and booties may be necessary, depending on the size of the spill.
8. Do not handle sharps directly; always use a dustpan/broom, tongs or scoop/scrapper to handle sharps.
9. The spill contents and used spill supplies are considered hazardous chemical waste. Contact the CHO for safe disposal of these materials.
10. Do not clean-up a spill if it is uncontrolled (the fumes are toxic or the spill is large), if you do not have a buddy to assist in the cleanup operation, or if you are not comfortable performing the cleanup.

Response to a Controlled Spill After Hours

In the event of a Controlled Spill, which requires spill supplies outside of the immediate area, and you are alone after business hours: (remember – you need a buddy)

1. Notify anyone that may be in the building, including security.
2. Use the emergency phone list and call the CHO or Emergency Coordinator.
3. If the CHO or Emergency Coordinator gives authority, wait for the arrival of a **Buddy** and work with the **Buddy** to clean up the spill.

Response to an Uncontrolled Spill

A response to an uncontrolled spill of hazardous materials or chemicals is an emergency response (see section 10 for a definition of emergency response). In the event that you spot an uncontrolled spill:

1. Yell “Help” to notify persons in the area that a spill has occurred.
2. If there is time and it is safe to do so, right the container and throw absorbent material on it.
3. Evacuate the area immediately.
4. If there is potential for a fire, explosion, or exposure, initiate the evacuation procedure by pulling the nearest fire alarm.
5. Contact a HazMat trained Safety Team member and your Supervisor ASAP (see Appendix VI or VII for qualified team members). The Safety Team member will evaluate the situation. **Most uncontrolled spills will require response by the local Fire Department**

and a trained HazMat contractor. Siamab is contracted with Veolia to respond to hazardous uncontrolled spills.

Response to an Uncontrolled Spill after Hours

In the event of an Uncontrolled Spill after business hours:

1. If the spill has the potential to cause a fire or explosion, pull the fire alarm and evacuate the building.
2. In all other situations, evacuate the area and restrict access to the spill.
3. Use the emergency telephone lists posted by the phones in the labs to call the Emergency Coordinator and the Emergency Coordinator Back-up.
4. The Emergency Coordinator and Back-up will give you specific instructions on how to handle the situation. If you must evacuate, take the sign-in log book from reception to see who else is in the building.
5. Be prepared to tell the Emergency Coordinator pertinent information, such as 1) where the spill is located, 2) approximately how much has spilled, 3) if there is a fire or explosion hazard, and 4) if there are any injured people.

Releases to the Environment

In the event of an environmental release of hazardous material into the air, water or soil, the Emergency Coordinator will evacuate, isolate and cordon off the affected area. The Emergency Coordinator will be responsible for obtaining appropriate contract Emergency Response services, and carrying out all requisite notification to city, state and federal agencies. See information in Appendix V.

Unstable Reactives

If a peroxide-forming compound is discovered that was not dated when received or opened, is past the expiration date, or has been opened and not been tested, it shall be treated as potentially unstable. **DO NOT TOUCH OR MOVE THE CONTAINER.** This pertains to pure substances and to those labeled by the manufacturer as containing inhibitors. Discovery of dry nitro compounds shall also be treated as potentially unstable reactive compounds. Notification shall be made immediately to the CHO and Emergency Coordinator, who will notify the local Fire Department. The facilities personnel and Emergency Coordinator will take all steps necessary to secure the room. A certified hazardous waste disposal company will be contacted to make arrangements for proper handling and disposal of the material in question.

Notifications

Incidents involving hazardous materials may need to be reported to local, state or federal agencies depending on the amount of material released or severity of injury. See Appendix V for guidance on notifications.

If notification is necessary for environmental emergencies, report to:

1. Newton Fire Department, 1164 Centre St. Newton MA, 02459, p.(617)796-2200
2. MA DEP, One Winter Street, Boston, MA 02108; and
3. The Regional Administrator, EPA Region 1, 5 Post Office Square, Suite 100, Boston, MA 02109

All reports must include:

1. Name, address and telephone number of the facility owner and operator
2. Name, address and telephone number of the facility
3. Date, time and description of incident
4. Name and quantity of material(s) involved
5. Extent of injuries, if any
6. Assessment of actual or potential hazards to public health, safety, welfare, or the environment, when applicable.
7. Estimated quantity and the disposition of recovered material that resulted from the incident
8. Any deviation between the written plan and the actual emergency response, the reasons for such deviation and resultant alterations of the plan.
9. A written proposal for preventing future, similar occurrences.

16. SUSPICIOUS MAIL OR PACKAGES

Suspicious mail or packages include items that do not look like they belong where they are found, or are suspicious due to their appearance such as excessive tape or string, discoloration, crystallization on the wrapper, protruding wires, strange odors, excessive postage, and/or addressing mistakes or issues.

If a suspicious package or mail item is found, do not touch, move, or handle the item. Isolate the area and notify the Emergency Coordinator and/or Senior Management, who will notify the police and fire department as appropriate. The Emergency Coordinator and/or Senior Management will evaluate the need to evacuate the building.

17. POWER FAILURES

If you are in a laboratory when power is lost, please leave equipment and materials in a “safe” state, which means cap solvent bottles, close fume hood doors, etc. and exit the lab as soon as possible. Turn off potentially hazardous pieces of equipment, such as blenders, grinders, sonicators, etc. so when the power comes back on, this equipment will not start up unattended.

You may remain in your office or other common area such as the lunchroom, hallway, or a conference room during a power failure.

The Emergency Coordinator or Emergency Coordinator back-up will conduct a building “sweep” to notify personnel if mandatory evacuation becomes necessary. In this event, please follow the standard building evacuation procedures unless otherwise instructed.

The Emergency Coordinator or Emergency Coordinator back-up will inform personnel when it is safe to reenter the facility after power has been restored.

18. NATURAL DISASTERS

Natural disasters such as blizzards, floods, hurricanes, earthquakes and tornados have been rare in New England, but can occur. In the event of a natural disaster, the Emergency Coordinator will make the decision, in conjunction with Senior Management, whether or not to evacuate the facility or to cancel work.

19. VIOLENT THREATS

In the event of a bomb threat, terrorist attack, or violent worker incident, the Emergency Coordinator or Senior Management will make the decision to evacuate the facility. The Emergency Coordinator will then contact the Newton Police and Fire departments.

20. REFERENCES

The following sources were used in drafting this Emergency Action Plan, including:

EPA website (June 2005): <http://www.epa.gov/epahome/violations.htm>

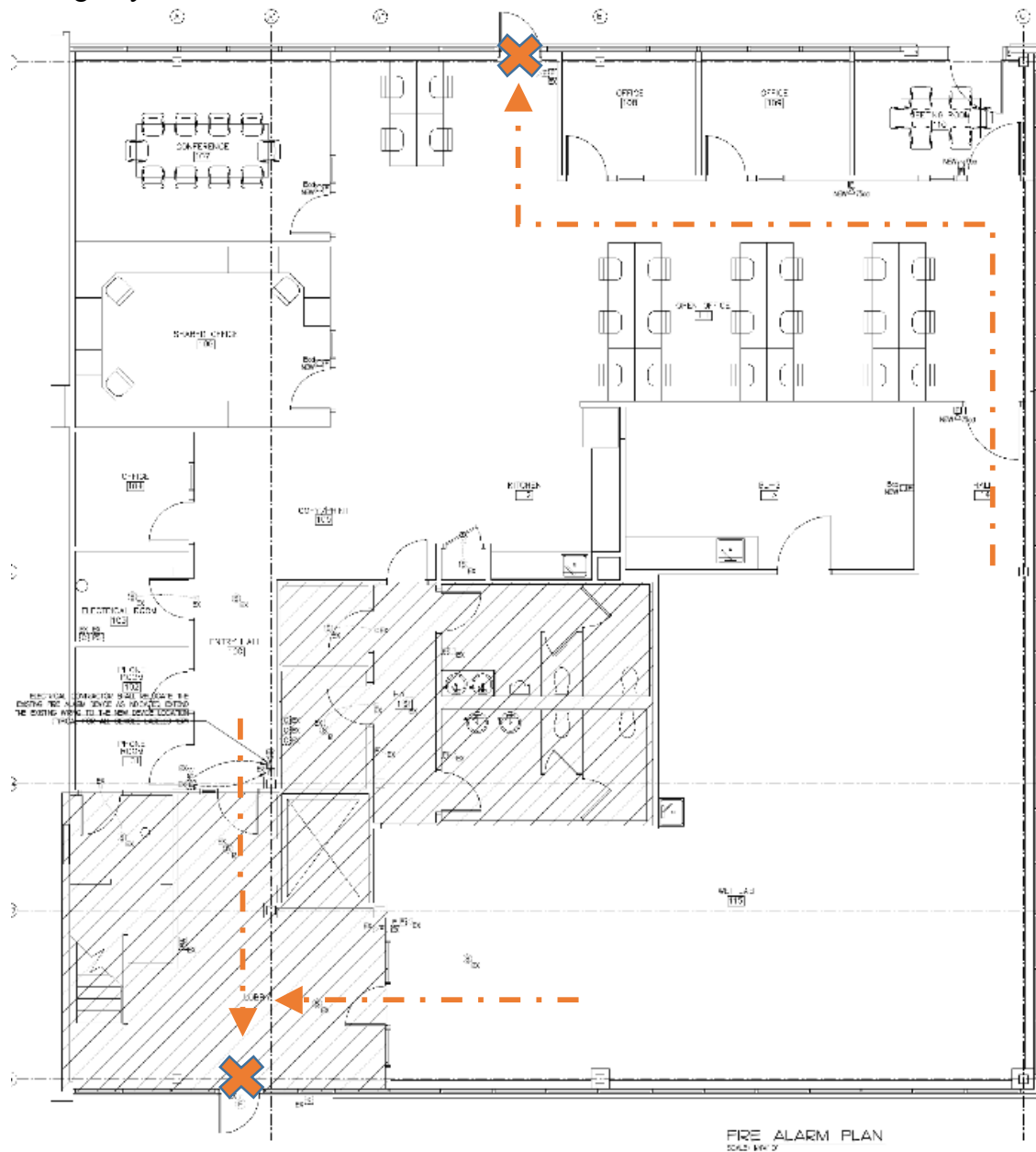
Northeastern University Emergency Assessment Plan (June 2010),
http://www.ehs.neu.edu/hazardous_waste/spill_plans/contingency_plan1/

Northeastern University Emergency Flow Diagram (June 2010),
http://www.ehs.neu.edu/hazardous_waste/spill_plans/contingency_plan1/images/Contingency_Plan_Assessment.gif

OSHA website (June 2005):
http://www.osha.gov/SLTC/etools/evacuation/portable_relation.html
http://www.osha.gov/SLTC/etools/evacuation/portable_use.html

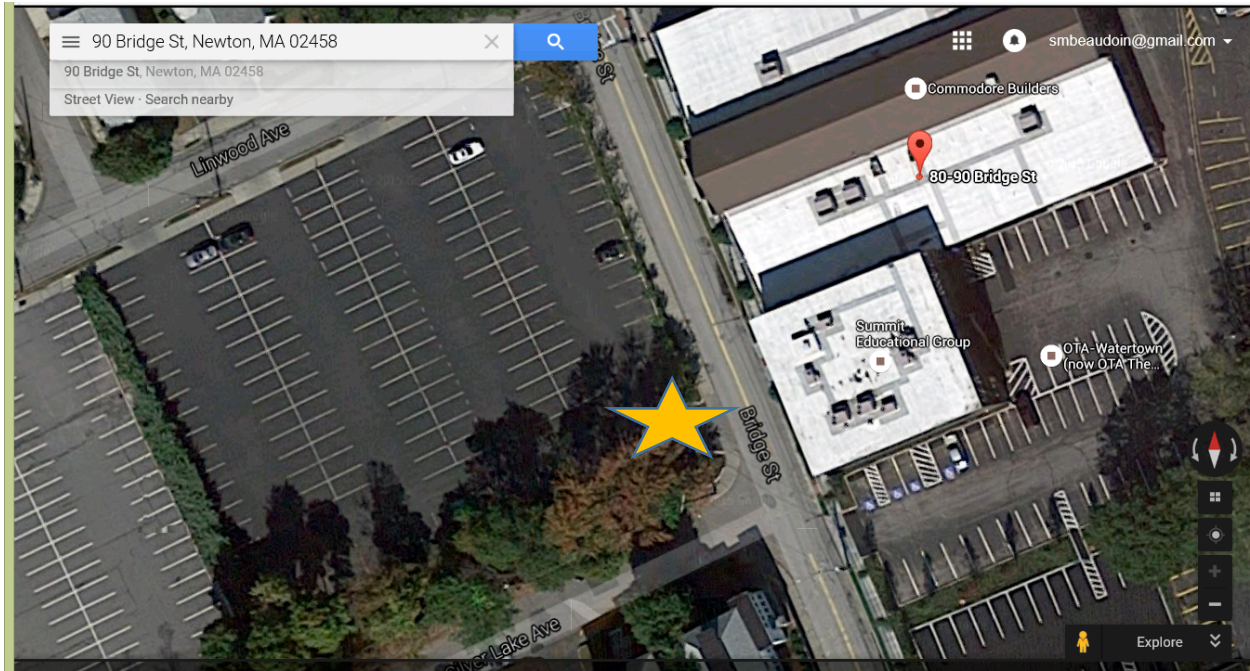
APPENDIX I EMERGENCY EXITS, EVACUATION ROUTES AND EQUIPMENT INVENTORY

Emergency Exits -



Siamab Therapeutics – EAP

Rally Point –



APPENDIX II HAZARDOUS MATERIAL PROCESS OR PROCESSING SUMMARY

Hazardous material processing evaluation will be inserted when completed.

APPENDIX III EVACUATION AND EMERGENCY PLAN FOR PEOPLE WITH DISABILITIES

The emergency plan must take into account people with physical handicaps, such as sight impaired, hearing impaired or those confined to a wheelchair.

As of July 2015, there is no need for a special plan at Siamab. If a plan is needed at any time in the future one will be written.

APPENDIX IV EMERGENCY COORDINATOR DUTIES

The Emergency Coordinator's responsibilities include the following:

Preparedness and Prevention

Be familiar with all aspects of the Emergency Action Plan, all operations and activities at Siamab, locations and characteristics of the waste and all hazardous materials in the facility.

Emergency Assessment and Incident Control

1. Identify the source, amount, and extent of all spilled materials
2. Assess possible hazards to public health, safety, or the environment that may result from the emergency or spill
3. Take all reasonable precautions necessary to ensure that fires, explosions, run off, and other spills are handled in an appropriate manner
4. Ensure damage does not spread, which includes, but is not limited to, calling the local Fire Department/HazMat team and use of appropriate spill control equipment
5. Ensure that no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed
6. Ensure the proper treatment, storage, or disposal of recovered waste, contaminated oil or surface water, or any other material that results from an uncontrolled spill, fire, explosion, or other release at the facility

Emergency Notification

If the Emergency Coordinator determines that the emergency or spill may threaten public health, safety, or the environment, or is a Hazardous Material reportable quantity spill:

1. activate the call down list in Appendix VI;
2. communicate the following information to the appropriate emergency office:
 - a. name and telephone number of the Emergency Coordinator,
 - b. company name and address,
 - c. type of incident,
 - d. names and quantities of materials involved,
 - e. extent of injuries (to the extent known),
 - f. possible hazards to public health, safety, or the environment outside the company (to the extent known)

Remediation:

The Emergency Coordinator will conduct the following remedial activities if there is an evacuation of the building or area in response to a fire, explosion or spill:

1. Contact facilities to monitor for leaks, pressure build-up, gas generation, and ruptures in valves, pipes and other equipment, wherever appropriate.
2. Collect, store and dispose of all hazardous wastes generated by the incident, including contaminated surface waters and soils.
3. Ensure that incompatible wastes are not disposed or stored in the affected area.

4. Clean, recharge, and reactivate the emergency equipment as needed, including fire extinguishers and spill kits.
5. Ensure that operations are not resumed in the affected area until the Fire Department or if necessary, the Massachusetts Department of Environmental Protection determines that there is no longer a threat to public health, safety, or the environment.

Spill Incident Reporting

The Emergency Coordinator will complete a detailed spill incident report for all emergencies that require activating the Emergency Action Plan. The Emergency Coordinator will submit a spill incident report to the Massachusetts Department of Environmental Protection within 7 days of the incident. See the attached flow diagram and Appendix V for guidance on state and local notification for spills.

Updating this Emergency Action Plan

The Emergency Coordinator will update this plan as needed, and will notify the local fire department of changes within 14 calendar days.

APPENDIX V EMERGENCY COORDINATOR CALL DOWN LIST

In an emergency situation, it may be necessary for the emergency coordinator to call local, state or federal agencies to report the emergency. Below is the call down list and procedure for emergency situations that warrant notification to outside agencies.

For all emergencies requiring outside assistance: **911**

For all fires, life threatening medical emergencies and HazMat emergencies: **911**

Newton Fire Department (business line) (617) 796-2200

For security threats: **911**

Newton Police Department (business line) (617)796-2100

An environmental emergency is a sudden threat to public health, or the well-being of the environment, arising from the release or potential release of oil, radioactive materials, biological materials, including recombinant organisms, or hazardous chemicals into the air, land, or water.

For environmental emergencies:

National Response Center	800-424-8802
MA DEP Emergency Response (spills)	888-304-1133
US EPA, Region 1	888-372-7341
Newton Board of Health	(617) 796-1420
Newton Fire Department	(617) 796-2200

For chemical spill response information:

Veolia	800-354-2382
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DECISION MATRIX FOR NOTIFICATION

If the substance is included on the Massachusetts Oil and Hazardous Materials List in 310 CMR 40.1600 and is reportable as a two-hour release under the Massachusetts Contingency Plan (MCP) or SARA, report to:

1. Local Fire Department
2. MA DEP, Northeast Region

If the substance is reportable under CERCLA, immediately report to:

1. Local Fire Department
2. MA DEP, Northeast Region
3. National Response Center

If the substance is not strictly reportable under the first two above, but the release poses a threat to the public health, safety or welfare of the environment, report immediately to:

1. Local Fire Department
2. MA DEP, Northeast Region

If the facility is classified as a Category 3, 4, or 5 Hazardous Material Processing facility in accordance with 527 CMR 33, and an incident involving fire department, EMS response, or a reportable release of hazardous materials occurs, a written post incident analysis must be initiated with the local fire department within 48 hours. This post incident analysis must comply with 527 CMR 33.07.

If the spill involved the chemical contamination of one or more people requiring medical attention as a result, report immediately to:

1. Local Fire Department
2. MA DEP, Northeast Region
3. National Response Center (only if CERCLA)

If a report is needed, according to the above, the report should include:

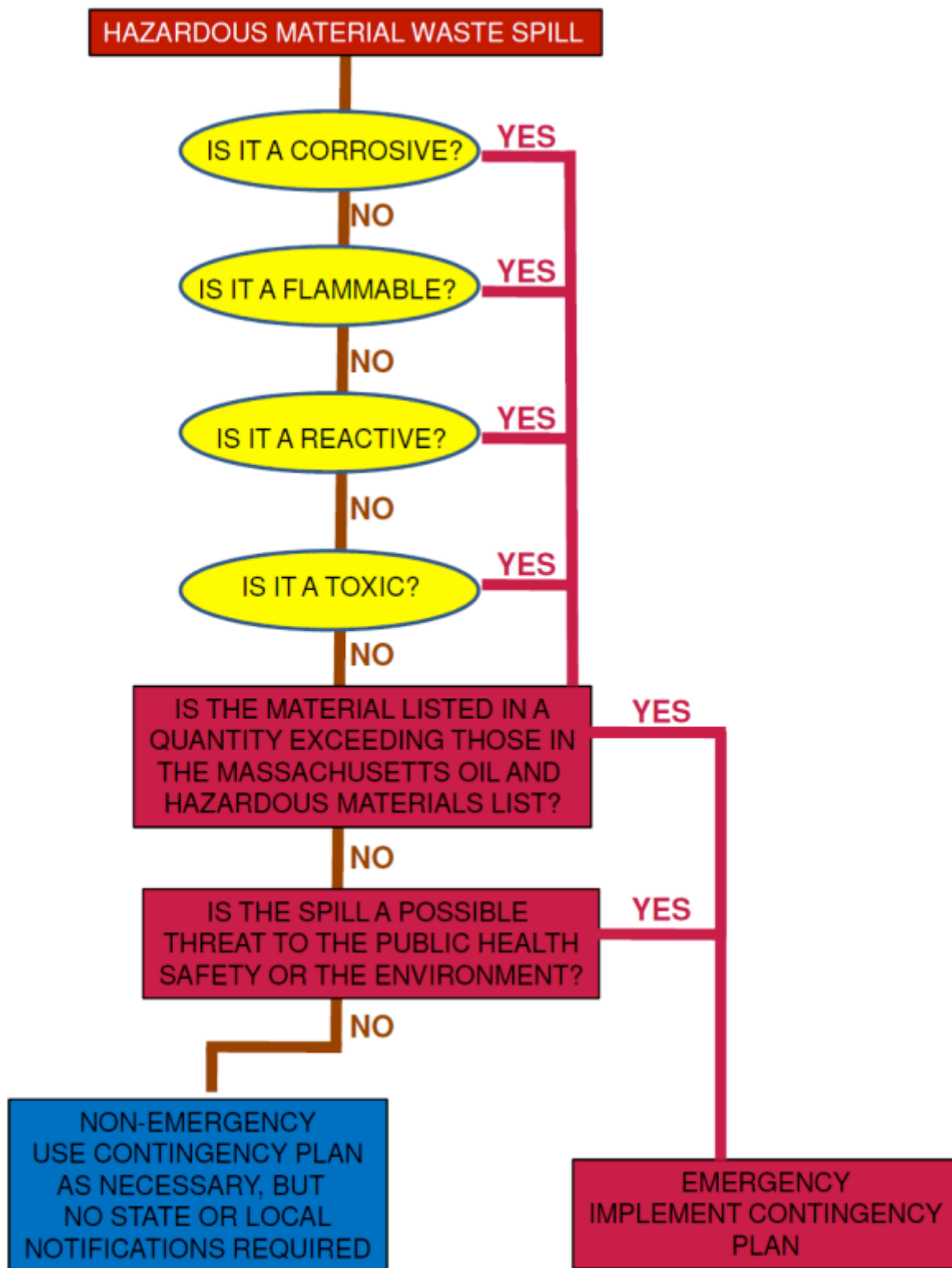
1. Name and telephone number of individual reporting;
2. Name and address of facility;
3. Time and type of incident;
4. Name and quantity of material(s) released;
5. Extent of injuries, if any;
6. Possible hazards to public health, safety, welfare, or the environment outside the facility.

If hazardous materials are released to the sewer, a copy of the report is sent to the MWRA within 7 days.

If there is a fatality, notify OSHA within 8 hours by calling 1-800-321-OSHA (1-800-321-6742). Any hospitalization, amputation or loss of an eye must also be reported within 24 hours. OSHA requires the following information for each reportable incident:

1. The establishment name;
2. The location of the incident;
3. The time of the incident;
4. The number of fatalities or hospitalized employees;
5. The names of any injured employees;
6. Your contact person and his or her phone number; and
7. A brief description of the incident.

If an employee is injured and incapacitated for a period of 5 or more calendar days, a *Massachusetts Employer's First Report of Injury or Fatality* form (Mass 101) must be completed and submitted online within 7 calendar days (not including Sundays or legal holidays). (<http://www.mass.gov/lwd/workers-compensation/wc-pubs/forms/form-list-numbered/form-101.html>)



APPENDIX VI EMERGENCY CONTACT LIST

Emergency Coordinators

The following emergency coordinators are responsible for response to emergency situations in the order listed.

Primary Emergency Coordinator:

Name Jenna Stein 857-222-5817 (mobile)

Address: 39 Mount Hood Road, Apt 6, Boston MA 02135

Available hours: 24/7

Secondary Emergency Coordinator (Back-Up Coordinator):

Name Jillian Prendergast 781-927-9734 (mobile)

Address: 18 Park Street Maynard, MA 01754

Available hours: 24/7

Safety Consultant

Stephanie Beaudoin

(781) 222-1002 x53 (mobile)

Safety Committee and other Safety Team Members (not otherwise listed)

Jillian Prendergast (781) 927-9734 Chemical Hygiene Officer /Biosafety Officer

Jenna Stein (857) 222-5817 Safety Committee Member

David Eavarone (617) 283-7161 Safety Committee Member

Siamab Company Official

For releases to the environment and/or emergencies that involve the public, a statement to the media or authorities may need to be made. The Siamab officials below are the only people to discuss company policy and views to the public in these situations.

Jeff Behrens

617 500-3455

APPENDIX VII EMERGENCY PHONE LIST

This list is posted by all phones in the laboratory areas and is included in the first section of the emergency red binders.

Life Threatening Emergencies:

Ambulance/Fire/Police: 911

Poison Center: 800-222-1222

Emergency Procedure:

- Report all emergencies immediately. First Aid kits are in the kitchen.
- Do not drive yourself. Do not go home or to the doctor alone.
- Provide SDS of hazardous materials(s) and call ahead.

<u>Between 8:00am and 4:30pm</u> Treatment of lacerations, contusions, strains/sprains, fractures, eye injuries.	<u>After hours, weekends, holidays</u> Treatment of lacerations, contusions, strains/sprains, fractures, eye injuries.	<u>Anytime</u> Treatment of respiratory problems, nausea, dizziness, chemical exposure.
Mt Auburn Occupational Health 725 Concord Ave Cambridge MA 02138 p. 617-354-0546 f. 617-868-4497	Maxwell Blum Emergency Pavilion at Newton Wellesley Hospital 2014 Washington St Newton MA, 02462 p. 617-243-6193 f. 617-243-6924	Call 911 Maxwell Blum Emergency Pavilion at Newton Wellesley Hospital 2014 Washington St Newton MA, 02462 p. 617-243-6193 f. 617-243-6924

- Supervisor submits written report within 24 hr. to the Safety Officer.

Siamab EMERGENCY COORDINATORS:

Jenna Stein Primary Emergency Coordinator (857) 222-5817
 Jillian Prendergast Back-up Emergency Coordinator (781) 927-9734

ADDITIONAL EMERGENCY CONTACTS:

Jillian Prendergast, Biosafety Officer / Chemical Hygiene Officer (781) 927-9734

SIAMAB COMPANY OFFICIALS:

Jeff Behrens, CEO 617 500-3455

CONTRACT SERVICES & CONSULTANTS

Chemical spills/fumes; Veolia Environmental (Contact LEPC Office if called) 800-354-2382
 Stephanie Beaudoin, Consulting Safety Officer 781-222-1002 x53

ADDITIONAL EMERGENCY TELEPHONE NUMBERS

Local Fire Department 617-796-2200
 Local Health Department 617 796-1420

APPENDIX IX INCIDENT REPORT FORM

INSTRUCTIONS FOR INCIDENT REPORT COMPLETION

- Complete an incident form in the case of a **work-related**:
 - injury
 - illness
 - allergy
 - exposure
 - spill
 - near miss
- An incident form must be completed within 24 hours of the occurrence.
- The employee and their supervisor are jointly responsible for completing and signing this form. The employee and supervisor should discuss the incident before each signs the form.
- Information required on the form is as follows:
 - the date on which the incident occurred
 - a detailed explanation of what happened (enough detail that someone reading the form could visualize what happened)
 - explain why the incident happened
 - give recommendations of how the incident can be avoided in the future
 - recommend corrective actions for the incident and projected completion dates, if applicable
 - attach additional information sheets if necessary
- The supervisor will review the form, ask/answer any necessary questions to get a complete picture of the incident, and implement corrective actions. The supervisor signs the form when he/she is satisfied with the level of detail in the form.
- Once the employee and the supervisor have signed the incident form, the original is forwarded to HR and a copy to Safety.

Note: If an employee is incapacitated for a period of 5 or more calendar days, a *Massachusetts Employer's First Report of Injury or Fatality* form (Mass 101) will be completed. Additional OSHA reporting criteria can be found in 29 CFR 1904.39.

INCIDENT FORM

Incident Date: _____ Estimated Incident Time: _____

Date Incident Report Completed: _____

Personnel Involved: _____

Witnesses (if any): _____

Location (room number): _____

Equipment Involved: _____

Chemicals/Fluids Involved: _____

Description of Incident:

Cause of Incident:

INCIDENT FORM *PAGE 2*

Exposure/Injury That Occurred:

Medical Treatment Details (if any):

Work Time Lost Due to Incident: _____ days

Restricted Work Due to Incident: _____ days

Description of Restricted Work: _____

Description of Immediate Response (first aid &/or cleanup & disposal methods):

Persons Involved in First Aid/Cleanup:

Employee Name (print):

Employee Signature:

Date:

Supervisor Name (print):

Supervisor Signature:

Date:

Report Received By: _____

Title: _____

Date: _____

OSHA Form 300 Recordable? Yes / No

OSHA FORM 300 RECORDABLE
ADDITIONAL INFORMATION FORM

PAGE 3 of Incident Form (when applicable)

1. Full name of injured employee: _____

2. Street Address, City, State, Zip: _____

3. Gender: ☐ Male ☐ Female

4. Date of Birth: _____

5. Hire Date: _____

6. Name of Physician or Health Care Professional: _____

7. Name of Treatment Facility: _____

8. Address of Treatment Facility: _____

9. Was there Emergency Room Treatment? ☐ Yes ☐ No

10. Was the employee hospitalized overnight? ☐ Yes ☐ No

11. Time employee began work on the day of the incident: _____ am/pm

12. Estimated time of incident: _____ am/pm

13. If the incident resulted in death, when did death occur: _____ am/pm

INCIDENT REPORT FOLLOW UP FORM

Incident Date: _____

Employee: _____

Recommendations for Prevention of Incident:

Follow-up and Corrective Actions:

Employee signature: _____ Date: _____

Supervisor signature: _____ Date: _____

Safety Officer signature: _____ Date: _____

Safety Partners, Inc.
19A Crosby Drive
Bedford, MA 01730
781-222-1022
info@safetypartnersinc.com
www.safetypartnersinc.com

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